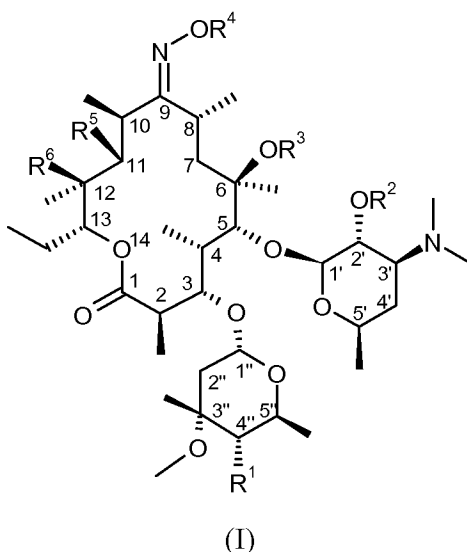


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of the Claims:**

1. (Currently amended): A compound of ~~general~~ formula (I)



wherein

$R^1$  is  $OC(O)(CH_2)_mXR^7$ ;

$R^2$  is hydrogen or a hydroxyl protecting group;

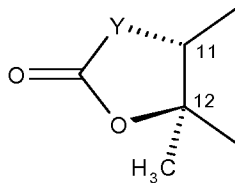
$R^3$  is hydrogen,  $C_{1-4}$ alkyl or  $C_{3-6}$ alkenyl optionally substituted by 9 to 10 membered fused bicyclic heteroaryl;

$R^4$  is hydrogen,  $C_{1-4}$ alkyl,  $C_{3-7}$ cycloalkyl,  $C_{3-6}$ alkenyl or a 5 or 6 membered heterocyclic group, wherein the alkyl, cycloalkyl, alkenyl and heterocyclic groups are optionally substituted by up to three substituents independently selected from optionally substituted 5 or 6 membered heterocyclic group, optionally substituted 5 or 6 membered heteroaryl,  $OR^8$ ,  $S(O)_nR^8$ ,  $NR^8R^9$ ,  $CONR^8R^9$ , halogen and cyano;

$R^5$  is hydroxy,  $C_{3-6}$ alkenyloxy optionally substituted by 9 to 10 membered fused bicyclic heteroaryl, or  $O(CH_2)_pO(CH_2)_qR^{10}$ ,

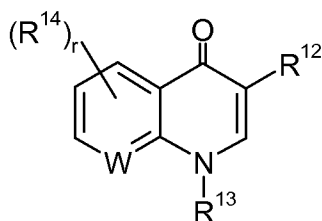
$R^6$  is hydroxy, or

$R^5$  and  $R^6$  taken together with the intervening atoms form a cyclic group having the following structure:

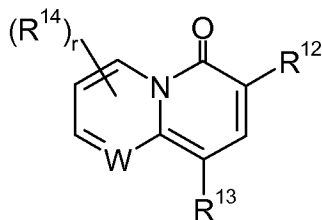


wherein Y is a bivalent radical selected from  $-\text{CH}_2-$ ,  $-\text{CH}(\text{CN})-$ ,  $-\text{O}-$ ,  $-\text{N}(\text{R}^{11})-$  and  $-\text{CH}(\text{SR}^{11})-$ ;

$\text{R}^7$  is a heterocyclic group having the following structure:



or



$\text{R}^8$  and  $\text{R}^9$  are each independently selected from hydrogen and  $\text{C}_{1-4}$ alkyl;

$\text{R}^{10}$  is hydrogen or  $\text{NR}^8\text{R}^9$ ;

$\text{R}^{11}$  is hydrogen or  $\text{C}_{1-4}$ alkyl substituted by a group selected from optionally substituted phenyl, optionally substituted 5 or 6 membered heteroaryl and optionally substituted 9 to 10 membered fused bicyclic heteroaryl;

$\text{R}^{12}$  is hydrogen,  $\text{C}(\text{O})\text{OR}^{15}$ ,  $\text{C}(\text{O})\text{NHR}^{15}$  or  $\text{C}(\text{O})\text{CH}_2\text{NO}_2$ ;

$\text{R}^{13}$  is ~~hydrogen~~,  $\text{C}_{1-4}$ alkyl optionally substituted by hydroxy or  $\text{C}_{1-4}$ alkoxy,

$\text{C}_{3-7}$ cycloalkyl, or optionally substituted phenyl or benzyl;

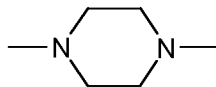
$\text{R}^{14}$  is halogen,  $\text{C}_{1-4}$ alkyl,  $\text{C}_{1-4}$ thioalkyl,  $\text{C}_{1-4}$ alkoxy,  $\text{NH}_2$ ,  $\text{NH}(\text{C}_{1-4}\text{alkyl})$  or  $\text{N}(\text{C}_{1-4}\text{alkyl})_2$ ;

$\text{R}^{15}$  is hydrogen or  $\text{C}_{1-4}$ alkyl optionally substituted by up to three groups independently selected from halogen,  $\text{C}_{1-4}$ alkoxy,  $\text{OC}(\text{O})\text{C}_{1-4}\text{alkyl}$  and  $\text{OC}(\text{O})\text{OC}_{1-4}\text{alkyl}$ ;

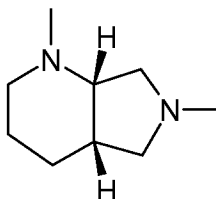
$\text{R}^{16}$  is hydrogen,  $\text{C}_{1-4}$ alkyl,  $\text{C}_{3-7}$ cycloalkyl, optionally substituted phenyl or benzyl, acetyl or benzoyl;

R<sup>17</sup> is hydrogen or R<sup>14</sup>, or R<sup>17</sup> and R<sup>13</sup> are linked to form the bivalent radical -O(CH<sub>2</sub>)<sub>2</sub>- or -(CH<sub>2</sub>)<sub>v</sub>-;

X is -U(CH<sub>2</sub>)<sub>s</sub>Z- or X is a group selected from:



and



U and Z independently are a divalent radical selected from -N(R<sup>16</sup>)-, -O-, -S(O)<sub>t</sub>-, -N(R<sup>16</sup>)C(O)-, -C(O)N(R<sup>16</sup>)- and -N[C(O)R<sup>16</sup>]-;

W is CR<sup>17</sup> or a nitrogen atom;

m is 0 or an integer from 1 to 5;

n, r and t are each independently selected from 0, 1 and 2;

p and q are each independently selected from 1 to 6 ;

s is an integer from 2 to 8; and

v is 2 or 3;

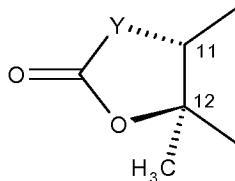
~~and~~ or a pharmaceutically acceptable derivatives salt thereof.

2. (Currently amended): A compound according to claim 1 wherein R<sup>2</sup> is hydrogen;  
or a pharmaceutically acceptable salt thereof.

3. (Currently amended): A compound according to claim 1 wherein R<sup>3</sup> is hydrogen;  
or a pharmaceutically acceptable salt thereof.

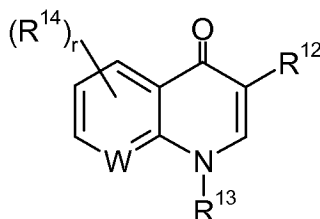
4. (Currently amended): A compound according to claim 3 wherein R<sup>4</sup> is hydrogen or C<sub>1-4</sub>alkyl optionally substituted by up to three substituents independently selected from optionally substituted 5 or 6 membered heteroaryl, OR<sup>8</sup>, S(O)<sub>n</sub>R<sup>8</sup>, NR<sup>8</sup>R<sup>9</sup>, halogen and cyano; or a pharmaceutically acceptable salt thereof.

5. (Currently amended): A compound according to wherein R<sup>5</sup> is hydroxy or O(CH<sub>2</sub>)<sub>p</sub>O(CH<sub>2</sub>)<sub>q</sub>R<sup>10</sup> and R<sup>6</sup> is hydroxy, or R<sup>5</sup> and R<sup>6</sup> taken together with the intervening atoms form a cyclic group having the following structure:



wherein Y is the bivalent radical -O-; or a pharmaceutically acceptable salt thereof.

6. (Currently amended): A compound according to claim 5 wherein R<sup>7</sup> is a heterocyclic group having the following structure:



wherein W is CR<sup>17</sup> where R<sup>17</sup> is hydrogen; or a pharmaceutically acceptable salt thereof.

7. (Currently amended): A compound according to claim 6 wherein X is  $-U(CH_2)_sZ-$  wherein U and Z are independently  $-NH-$  or  $-O-$ ; or a pharmaceutically acceptable salt thereof.

8. (Cancelled).

9. (Currently amended): A compound selected from:

4''-O-[3-[[2-[(3-carboxy-7-chloro-1-cyclopropyl-1,4-dihydro-4-oxo-6-quinolinyl) amino]ethyl]amino]propionyl]-11-O-(2-dimethylaminoethoxymethyl)-(9E)-methoximino erythromycin A,

4''-O-[3-[[2-[(3-carboxy-7-chloro-1-cyclopropyl-1,4-dihydro-4-oxo-6-quinolinyl) amino]ethyl]amino]propionyl]-11,12-carbonate-(9E)-O-(2-propyl)oximino erythromycin A,

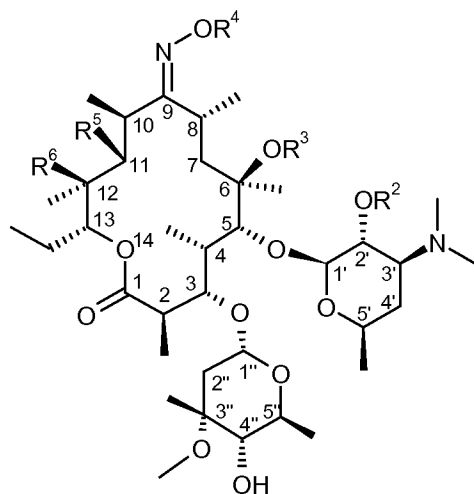
4''-O-[3-[[2-[(3-carboxy-7-chloro-1-cyclopropyl-1,4-dihydro-4-oxo-6-quinoliny] amino]ethyl]amino]propionyl]-11,12-carbonate-(9E)-methoximino erythromycin A, and

4''-O-[3-[[2-[(3-carboxy-7-chloro-1-cyclopropyl-1,4-dihydro-4-oxo-6-quinoliny] amino]ethyl]amino]propionyl]-11,12-carbonate-(9E)-O-(ethoxymethyl)oximino erythromycin A,

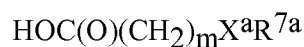
or a pharmaceutically acceptable ~~derivative~~ salt thereof.

10. (Currently amended): A process for the preparation of a compound as claimed in claim 1 which comprises:

a) reacting a compound of formula (II)



(II)



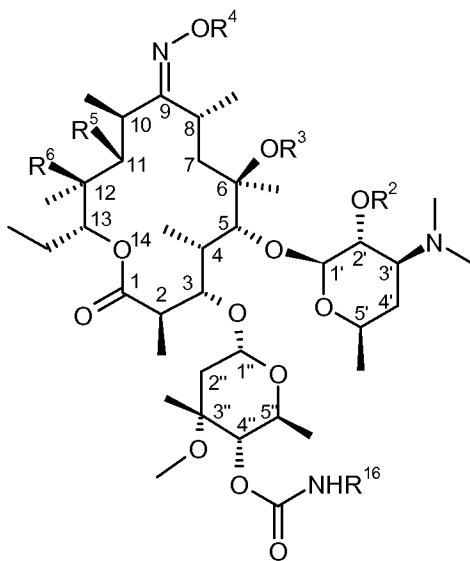
(III)

with a suitable activated derivative of the acid (III), wherein m is an integer 1 to 5, X<sup>a</sup> and R<sup>7a</sup> are X and R<sup>7</sup> as defined in claim 1 or ~~groups convertible to~~ protected forms of X and R<sup>7</sup>, to produce a compound of formula (I) wherein m is an integer 1 to 5;

b) reacting a compound of formula (II), in which the 4'' hydroxy is suitably activated, with a compound of formula X<sup>a</sup>R<sup>7a</sup> (IV), wherein R<sup>7a</sup> is R<sup>7a</sup> as defined in claim 1 or a protected form of group convertible to R<sup>7</sup>, s and Z have the meanings defined in claim 1 and X<sup>a</sup> is – U(CH<sub>2</sub>)<sub>s</sub>Z- or a protected form of group convertible to –U(CH<sub>2</sub>)<sub>s</sub>Z-, in which U is a group

selected from selected from  $-N(R^{16})-$ ,  $-O-$ , and  $-S-$ , to produce a compound of formula (I) wherein m is 0 and U is a group selected from  $-N(R^{16})-$ ,  $-O-$  and  $-S-$ ;

c) reacting a compound of formula (V)

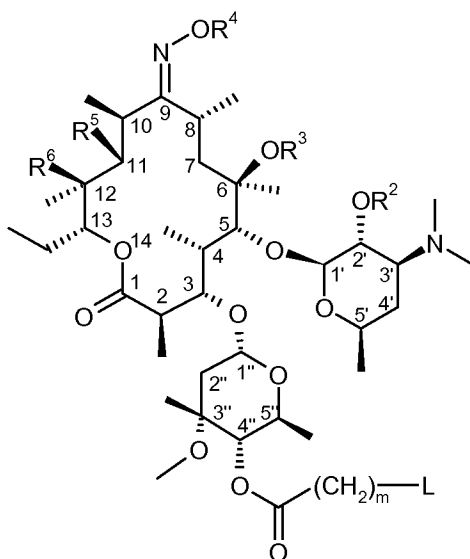


(V)

wherein  $R^{16}$  has the meaning defined in claim 1 with a suitable activated derivative of the carboxylic acid  $HOC(O)(CH_2)_sZ^aR^{7a}$  (VI), wherein  $R^{7a}$  and  $Z^a$  are  $R^7$  and  $Z$  as defined in claim 1 or protected forms of groups convertible to  $R^7$  and  $Z$ , to produce a compound of formula (I) wherein m is 0 and U is  $-N(R^{16})C(O)-$ ;

d) reacting a compound of formula (II) with a suitably activated derivative of the carboxylic acid  $HOC(O)C(O)N(R^{16})(CH_2)_sZ^aR^{7a}$  (VIIb) to produce a compound of formula (I) wherein m is 0 and U is  $-C(O)N(R^{16})-$ ;

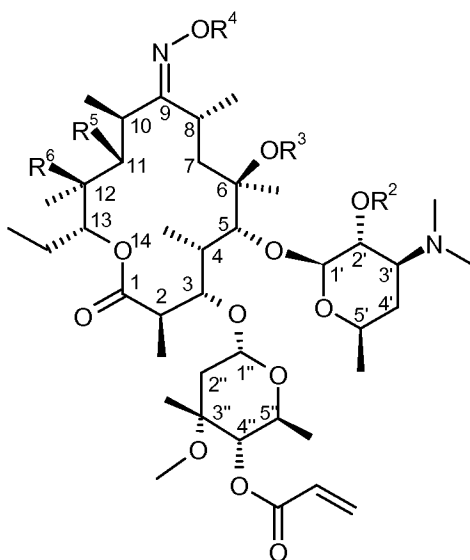
e) reacting a compound of formula (VII)



(VII)

with a compound of formula  $X^aR^{7a}$  (IV), wherein  $R^{7a}$  and  $X^a$  are  $R^7$  and  $X$  as defined in claim 1 or ~~groups convertible to~~ protected forms of  $R^7$  and  $X$ , U is a group selected from -N( $R^{16}$ )-, -O- and -S-, and L is suitable leaving group, to produce a compound of formula (I) wherein m is 1 to 5 and U is a group selected from -N( $R^{16}$ )-, -O- and -S-; or

f) reacting a compound of formula (IX), with a compound of formula  $X^aR^{7a}$  (IV),



(IX)

wherein  $R^{7a}$  and  $X^a$  are  $R^7$  and  $X$  as defined in claim 1 or ~~groups convertible to~~ protected forms of  $R^7$  and  $X$ ,  $U$  is a group selected from  $-N(R^{16})-$ ,  $-O-$  and  $-S-$ , to produce a compound of formula (I) wherein  $m$  is 2 and  $U$  is a group selected from  $-N(R^{16})-$ ,  $-O-$  and  $-S-$ ;

and thereafter, if required, subjecting the resulting compound to one or more of the following operations:

- i) removal of the protecting group  $R^2$ ,
- ii) conversion of  $X^aR^{7a}$  or  $Z^aR^{7a}$  to  $XR^7$  or  $ZR^7$  respectively, and
- iii) conversion of the resultant compound of formula (I) into a pharmaceutically acceptable ~~derivative~~ salt thereof.

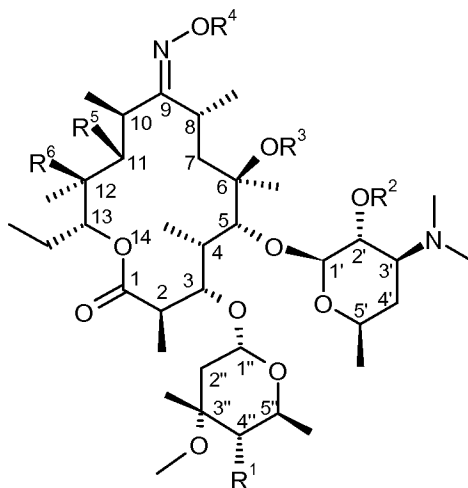
Claims 11-13 (Cancelled).

14. (Currently amended): A pharmaceutical composition comprising a compound according to claim 1 or a pharmaceutically acceptable ~~derivative~~ salt thereof in admixture with one or more pharmaceutically acceptable carriers or excipients.

15. (Currently amended): A method for the treatment of the human or non-human animal body to combat a bacterial ~~microbial~~ infection comprising administration of an effective amount of a compound according to claim 1 or a pharmaceutically acceptable ~~derivative~~ salt thereof.

16. (Currently amended): A compound of ~~general~~ formula (IA)





(IA)

wherein

$R^1$  is  $OC(O)(CH_2)_mXR^7$ ;

$R^2$  is hydrogen or a hydroxyl protecting group;

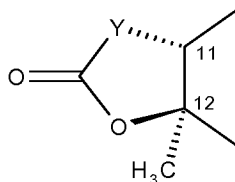
$R^3$  is hydrogen,  $C_{1-4}$ alkyl or  $C_{3-6}$ alkenyl optionally substituted by 9 to 10 membered fused bicyclic heteroaryl;

$R^4$  is hydrogen,  $C_{1-4}$ alkyl,  $C_{3-7}$ cycloalkyl,  $C_{3-6}$ alkenyl or a 5 or 6 membered heterocyclic group, wherein the alkyl, cycloalkyl, alkenyl and heterocyclic groups are optionally substituted by up to three substituents independently selected from optionally substituted 5 or 6 membered heterocyclic group, optionally substituted 5 or 6 membered heteroaryl,  $OR^8$ ,  $S(O)_nR^8$ ,  $NR^8R^9$ ,  $CONR^8R^9$ , halogen and cyano;

$R^5$  is hydroxy,  $C_{3-6}$ alkenyloxy optionally substituted by 9 to 10 membered fused bicyclic heteroaryl or  $O(CH_2)_pO(CH_2)_qR^{10}$ ,

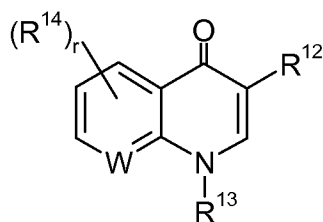
$R^6$  is hydroxy, or

$R^5$  and  $R^6$  taken together with the intervening atoms form a cyclic group having the following structure:

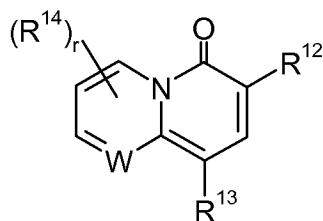


wherein Y is a bivalent radical selected from  $-CH_2-$ ,  $-CH(CN)-$ ,  $-O-$ ,  $-N(R^{11})-$  and  $-CH(SR^8)-$ ;

$R^7$  is a heterocyclic group having the following structure:



or



R<sup>8</sup> and R<sup>9</sup> are each independently selected from hydrogen and C<sub>1-4</sub>alkyl;

R<sup>10</sup> is hydrogen or NR<sup>8</sup>R<sup>9</sup>;

R<sup>11</sup> is hydrogen or C<sub>1-4</sub>alkyl substituted by a group selected from optionally substituted phenyl, optionally substituted 5 or 6 membered heteroaryl and optionally substituted 9 to 10 membered fused bicyclic heteroaryl;

R<sup>12</sup> is hydrogen, C(O)OR<sup>15</sup>, C(O)NHR<sup>15</sup> or C(O)CH<sub>2</sub>NO<sub>2</sub>;

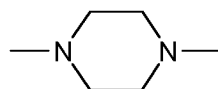
R<sup>13</sup> is ~~hydrogen~~, C<sub>1-4</sub>alkyl, C<sub>3-7</sub>cycloalkyl, or optionally substituted phenyl or benzyl;

R<sup>14</sup> is halogen, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>thioalkyl, C<sub>1-4</sub>alkoxy, NH<sub>2</sub>, NH(C<sub>1-4</sub>alkyl) or N(C<sub>1-4</sub>alkyl)<sub>2</sub>;

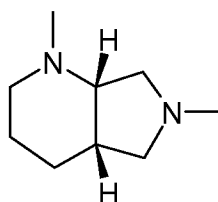
R<sup>15</sup> is hydrogen or C<sub>1-4</sub>alkyl;

R<sup>16</sup> is hydrogen, C<sub>1-4</sub>alkyl, C<sub>3-7</sub>cycloalkyl, optionally substituted phenyl or benzyl, acetyl or benzoyl;

X is -U(CH<sub>2</sub>)<sub>8</sub>Z- or X is a group selected from:



and



Serial No.: 10/533,461  
Group Art Unit No.: 1623

U and Z independently are a divalent radical selected from  $-N(R^{16})-$ ,  $-O-$ ,  $-S(O)_t-$ ,  $-N(R^{16})C(O)-$ ,  $-C(O)N(R^{16})-$  and  $-N[C(O)R^{16}]-$ ;

W is a carbon or a nitrogen atom;

m is 0 or an integer from 1 to 5;

n, r and t are each independently selected from 0, 1 and 2;

p and q are each independently selected from 1 and 2; and

s is an integer from 2 to 8;

~~and~~ or a pharmaceutically acceptable ~~salts and solvates~~ salt thereof.